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ABSTRACT

This report on the activities of the Educational Technology program of the District of Columbia Public Schools (DCPS) during the 1985-86 school year focuses on the planning and development of the next Educational Technology Five-Year Plan for the school district. The major emphasis of this program for grades pre-K through 12 since its first full year in 1983-84 have been computer literacy and educational television. Included are (1) a summary of the project and the findings of the evaluation; (2) background information and a description of the project; (3) the external evaluation design, i.e., the Planning, Monitoring, and Implementing (PMI) Evaluation Model for Decision Making developed by the DCPS Division of Quality Assurance; (4) a narrative summary of the results and reporting forms for the final evaluation and an interim evaluation; and (5) eight appendices. The appended materials include the evaluation model schema; documentation of the planning workshop, including a list of participants, the agenda, the goals from the reports of four small study groups, and an analysis of the results from the workshop questionnaire; and the draft Educational Technology Five Year Plan Matrix, which covers the computer literacy training laboratory, library/media services, instructional television, and provisions for the use of new and emerging technologies to improve instruction and learning. (MES)

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FINAL EVALUATION REPORT

for

EDUCATIONAL TECHNOLOGY

E.C.I.A. CHAPTER 2

August 1986

IR012676

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SUMMARY AND FINDINGS

Title

Educational Technology

Project Director

Kyo Jhin

Project Coordinator

Pat Hamilton

Project Locations

Rabaut Junior High School
North Dakota and Kansas Avenues, N.W.
Washington, D.C.

Target Population

The target population for the Educational Technology program includes 90,000 students in regular programs, special education, career development and continuing education, and all teachers and administrators.

Background

The Division of Educational Technology was established to provide systemwide direction to the application of educational technology in improving instructional programs and services for students, pre-K through 12th grade. Each year, rather than trying to evaluate the entire division, projects within the division are selected for evaluation. Previous evaluations have included both instructional television projects and computer-related projects such as the Writing-to Read program.

The Division of Educational Technology was mandated to implement the "Computer Literacy Five-Year Plan SY 1983-87" developed in 1982, and to organize other technologies partially assisted by ECIA Chapter 2 funds. Since the first full year of the project, 1983-84, the emphasis of the Division has been on computer literacy and educational television.

Description of Project

During the 1985-86 year, the evaluation was centered on the next Educational Technology Five-year Plan, including the planning workshop and development of the final document.

Stated Objectives

A. By April 30, 1986, based on the results of the interaction and output of workshop participants, Division of Educational Technology personnel will have developed an outline for an Educational Technology Five-Year Plan.

B. By June 30, 1986, based on the workshop-developed outline and input from literature, correspondence and other sources, Division of Educational Technology personnel will have produced a Five-year Plan for Educational Technology in the DCPS.

Evaluation

The evaluation follows the Planning, Monitoring, and Implementing (PMI) Evaluation Model for Decision-Making which was developed by the Division of Quality Assurance, District of Columbia Public Schools.

Findings

1. Preceding the Five Year Plan workshop, 10 groups submitted status reports concerning their involvement in Educational Technology.

2. The workshop was held on March 4, 1986 with 32 participants representing 20 areas such as ECIA Chapter 1, Secondary School Improvement, Staff Development, Planning, and Computer laboratories.

3. Participants were divided into 4 subgroups: Computer literacy, instructional television, library and media services, and additional technologies. Each group developed goals, provided information, ideas, and recommendations.

4. Questionnaire results showed satisfaction with individual participation and group decisions.

5. Based on workshop reports, interviews and input from other research, the project personnel completed a draft plan that was distributed for critiqueing, revised and completed, and submitted to the Division of Program Development and Planning in August 1986.

BACKGROUND AND PROJECT DESCRIPTION

Introduction

Purpose - The purpose of the Educational Technology program is to provide systemwide direction for the application of educational technology in improving instructional programs and services for students, pre-K through 12th grade.

Need - The development of new technologies in the area of education has led to the recognition that student learning could be improved through the acquisition and implementaion of new educational technologies. The DCPS Computer Literacy Five-Year Plan pointed to the need for coordination and direction of educational technology within DCPS and the structure of educational planning related to this area.

History -In 1982, the District of Columbia Public Schools (DCPS) Computer Literacy Planning Group developed the "Computer Literacy Five Year Plan SY 1983-87". The Division of Educational Technology was established to implement the plan and to organize other technologies, partially assisted by 1982-83 ECIA Chapter 2 funds. The project manager was hired in January 1983 and subsequently assigned staff members and ordered equipment for the project to begin during the 1983-84 school year.

The two major thrusts of the educational technology program since its establishment were in computer literacy and in educational TV. Past evaluation records indicated that these two main aspects have been advanced through the planning and direction of the Educational Technology Office. The evaluations also showed that effective management practices have been demonstrated.

Description of the Project

Target Population -The target population for Educational Technology consists of 90,000 students in regular programs, special education, career development and continuing education, all teachers and administrators.

Staffing -The project director remained with the Division during the 1985-1986 school year. A project coordinator was hired with his district budgeted staff. An assistant was hired specifically to coordinate the planning workshop and the writing of the Educational Technology Five Year Plan.

EXTERNAL EVALUATION DESIGN - PLANNING, MONITORING AND IMPLEMENTING (PMI) EVALUATION MODEL FOR DECISION-MAKING

The evaluation follows the Planning, Monitoring, and Implementing (PMI) Evaluation Model for Decision-Making which was developed by the Division of Quality Assurance, District of Columbia Public Schools. (See Appendix A.) The evaluation design which was developed at the beginning of the project year, consisted of the intended inputs, processes and outcomes on specially designed status report forms. The interim report distributed at the mid-point of the project cycle related, on the status report forms, agreements or discrepancies between intended and observed inputs and processes. This final report includes the interim report data brought up to date, plus the agreements and discrepancies between intended and observed outcomes for each objective. Supporting data are included in the appendix. Preceding the PMI status report forms is the results section which summarizes the agreements and discrepancies for each objective and states a general conclusion.

RESULTS

Evaluation Results - Narrative Summary

The results of the evaluation are summarized in this section. Following the narrative are the inputs, processes and outcomes on which this summary is based presented in the PMI reporting format. Supporting data are in the appendix.

Objective A: By April 30, 1986, based on the results of the interaction and output of workshop participants, Division of Educational Technology personnel will have developed on outline for an Educational Technology Five-Year Plan.

There was agreement between all intended and observed inputs and processes. The project coordinator began working in December 1985 which delayed some of the processes and necessitated changing the date of the workshop DCPS groups involved in Educational Technology prepared status reports. Workshop participants were selected from all areas of instruction and assigned to subgroups for the workshop. Some of the areas represented were Planning, Computer Literacy, Instructional Services, Assessment, Secondary School Improvement, and Chapter 1. A set of goals, objectives and agenda were developed and the workshop was held on March 4, 1986. Subgroups worked on assigned tasks, recommendations were drafted, and small group reports written. Participants completed questionnaires concerning their group work.

The three outcomes showed a status of agreement between intended and observed items. An examination of small group reports showed that ideas were submitted by all groups. Participant questionnaires showed that group contributions came from most of the members and that individuals were satisfied with their group decisions. A draft outline for the plan was prepared.

Objective B: By June 30, 1986, based on the workshop-developed outline and input from literature, correspondence, and other sources, Division of Educational Technology personnel will have produced a Five-Year Plan for Educational Technology in the District of Columbia Public Schools.

There was agreement between all intended and observed inputs and processes in Objective B. The project coordinator interviewed personnel from the Divisions of Bilingual and Special Education for input into the plan. Using that input, results of the workshop, and other background material, project personnel wrote a draft of the Five Year Plan for Educational Teachnology for 1987-1991, which was then disseminated, critiqued and revised. There was partial agreement on the outcome, because of the date of submission. The matrix was completed and transmitted to the Division of Program Development and Planning in August 1986.

Conclusion:

All tasks in the preparation, design and carrying through of workshop activities were completed. There was good representation both in the preparation of status reports and in small group participation at the workshop. The project coordinator used the various types of input to complete the plan which was critiqued and revised before submitting it to the Superintendent. Due to the late hiring of the coordinator, all activities were delayed but the final product was transmitted to the Division of Program Development and Planning in August 1986.

Decisions:

This report will be forwarded to the project director, project manager, LEA Chapter 2 director, the Superintendent and the Board of Education to aid them in their decision-making concerning this project.

FINAL EVALUATION REPORT

PLANNING, MONITORING, AND IMPLEMENTING (PMI)
EVALUATION MODEL FOR DECISION-MAKING

Reporting Form

Goal: To provide systemwide direction to the application of educational technology

Objective A: By April 30, 1986, based on the results of the interaction and output of workshop participants, Division of Educational Technology personnel will have developed an outline for an Educational Technology Five-Year Plan.

PART I

INPUTS

INTENDED	STATUS	OBSERVED
a. Project director	Agreement	a. The project director is the Assistant Superintendent, head of the Division of Educational Technology. He is listed on the ECIA Chapter 2 Directory as coordinator, but will be referred to in this report as the project director.
b. Project coordinator	Agreement	b. The project coordinator, also referred to as the workshop coordinator, began working in December 1985, with the specific duty of coordinating the production of the Educational Technology Five-Year Plan. Because of the delay, it was necessary to change the date of the workshop, in the objective. The evaluators have met with the coordinator frequently.
c. District of Columbia Public School (D.C.P.S.) personnel from whom workshop participants will be selected	Agreement	c. Personnel were selected from all areas of instruction and assigned to subgroups for workshop tasks. See Appendix B.

OBJECTIVE A

PART I (continued)

INPUTS

INTENDED	STATUS	OBSERVED
d. Clerical assistance	Agreement	d. Educational Technology has a secretary, whom evaluators have met.
e. Adequate supplies and materials	Agreement	e. The project coordinator verified that supplies and materials are adequate.
f. Adequate space for planning activities and for workshops	Agreement	f. The evaluators have seen the space at Rabaut school. The project coordinator verified that it is adequate.

PART II

PROCESSES †

INTENDED	STATUS	OBSERVED
1.1 Project director will identify workshop participants.	Agreement	1.1 A tentative list of workshop participants is on file in the Chapter 2 office.
1.2 Project personnel will conduct a search of the literature to locate relevant information for the Five-Year Plan.	Agreement	1.2 The project coordinator verified that she has been collecting information through letters to Dallas and Fairfax and through ERIC search.
1.3 Project personnel will plan and prepare agenda, workshop goals and objectives, task and group assignments, and related materials.	Agreement	1.3 Evaluator examined a prepared set of tentative goals, objectives and agenda. Due to the late hiring of the workshop coordinator, the workshop was rescheduled for March 1986.
1.4 Prior to the workshop, DCPS groups involved in educational technology, will submit status reports.	Agreement	1.4 The Educational Technology status reports are on file in the DQA office for 10 groups, see appendix C.
1.5 Sub-groups will meet as scheduled and work on assigned tasks.	Agreement	1.5 The project coordinator verified that subgroups worked on assigned tasks. Copies of the small group reports are on file in the DQA. See Appendix D for workshop agenda and goals.
1.6 Sub-groups will submit draft recommendations.	Agreement	1.6 The recommendations were drafted at the workshop, and are a part of the small group reports.
2.1 The Division of Quality Assurance (DQA) Chapter 2 evaluation team with input from the project coordinator, will design a participant questionnaire.	Agreement	2.1 The questionnaire has been designed and a copy is on file in the Chapter 2 office.

† Processes numbered to correspond with outcomes

OBJECTIVE A

PART II (continued)

PROCESSES †

INTENDED	STATUS	OBSERVED
2.2 Participants will complete questionnaires.	Agreement	2.2 Questionnaires were completed at the workshop, and are on file in the DQA.
3.1 Project personnel will collect and synthesize	Agreement	3.1 The project coordinator verified that Sub-group reports were collected at the workshop and synthesized by project personnel.
3.2 Project personnel will draft an outline based on sub-group reports.	Agreement	3.2 An outline was drafted after the workshop, and a copy of the tentative plan is on file in the DQA office.

† Processes numbered to correspond with outcomes

OBJECTIVE A

PART III

OUTCOMES

INTENDED	STATUS	OBSERVED
1. An examination by the DQA Chapter 2 Evaluation Team by April 30, 1986, of sub-group reports submitted to the Assistant Superintendent, Division of Educational Technology, at the end of the planning workshop, will show that all groups submitted ideas to contribute to the D.C.P.S. Educational Technology Five-Year Plan outline.	Agreement	1. An examination of small group reports by the evaluator showed that ideas were submitted by all groups. Appendix E contains a copy of the goals section of each report.
2. An analysis of the results of questionnaires submitted to the DQA Chapter 2 Evaluation Team by the project coordinator by Apirl 30, 1986, will show that the majority of the participants felt they were able to contribute information for the D.C.P.S. Educational Technology Five-Year Plan outline.	Agreement	2. Two questions of the workshop questionnaire pertaining to participants contribution to the groups. On the extent to which participants feel they contributed the mean score was 4.61 and scale of 1 to 5 being highest. On satisfaction with the group decisions and recommendations the mean was 4.33 on the same scale. See Appendix F for itemized results.
3. An examination by the DQA Chapter 2 Evaluation Team by April 30, 1986, of data submitted by the project director, will show that an outline for a 5 year Educational Technology Plan was completed.	Agreement	3. A draft outline for the 5 year plan was shared with the evaluators and is on file in DQA.

INTERIM VALUATION REPORT

PLANNING, MONITORING, AND IMPLEMENTATION (PMI)
EVALUATION MODEL FOR DECISION-MAKING

Reporting Form

Goal: To provide systemwide direction to the application of educational technology

Objective B: By June 30, 1986, based on the workshop-developed outline and input from literature, correspondence and other sources, Division of Educational Technology personnel will have produced a Five-Year Plan for Educational Technology in the District of Columbia Public Schools.

PART I

INPUTS

INTENDED	STATUS	OBSERVED
Inputs "a" through "f" are the same as those in Objective A.		
g. Staff of D.C.P. Schools selected to be interviewed.	Agreement	g. The project coordinator stated that she had selected representatives from the Division of Bilingual Education, Special Education and Adult Education, with Adult Education choosing not to participate.
h. Adequate libraries for literature search.	Agreement	h. The project coordinator has a list of libraries and information centers where literature searches may be undertaken.

OBJECTIVE B

PART II

PROCESSES

INTENDED	STATUS	OBSERVED
1.1 Using the outline, project personnel will interview the staff of appropriate schools, and other sources for input into the plan.	Agreement	1.4 The project coordinator verified that she interviewed personnel as planned.
1.2 Project personnel will write a first draft of the Five-Year Plan.	Agreement	1.2 DQA has on file the first draft of the plan which was designed using workshop results research data, and interview material.
1.3 Project personnel will disseminate drafts for critique and suggestions.	Agreement	1.3 The plan was distributed to all of the department heads within Educational Technology, and to the Divisions of Bilingual, and Special Education for review. The project coordinator stated that many were late in returning the forms.
1.4 Project personnel will revise and complete the Five-Year Plan.	Agreement	1.4 Project personnel revised and completed the five year plan. A copy is on file in the DQA office.

† Processes numbered to correspond with outcomes

OBJECTIVE B

PART III

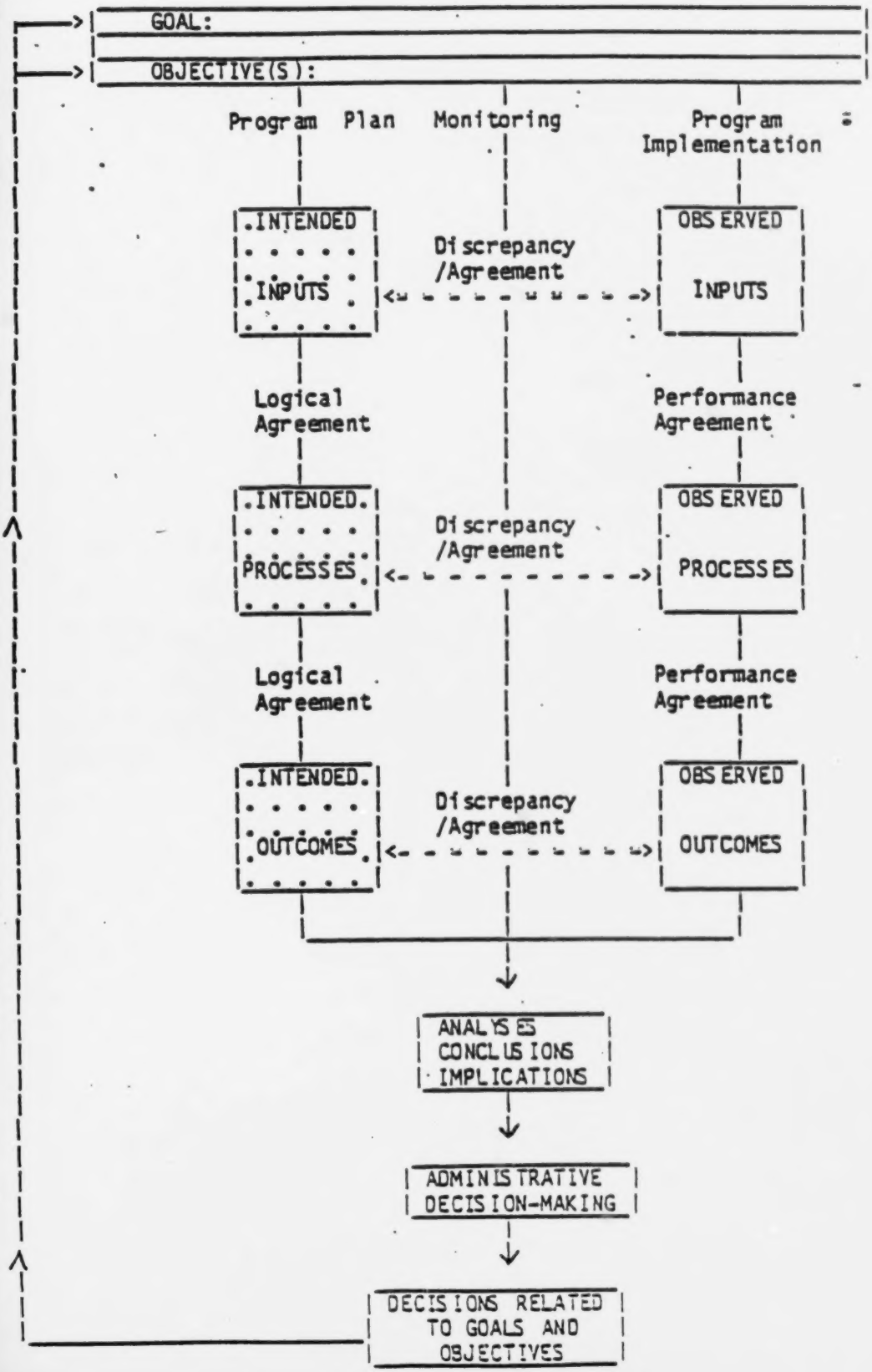
OUTCOMES

INTENDED	STATUS	OBSERVED
1. An examination by the DQA Chapter 2 Evaluation Team by June 30, 1986, of a report prepared for the Superintendent by project personnel will show that a D.C.P.S. Educational Technology Five-Year Plan has been completed.	Partial Agreement	1. As verified by the copy of the transmittal letter, the Educational Technology Five Year Plan Matrix was submitted to the Division of Program Development and Planning on August 29, 1986. (See Appendices G and H.)

APPENDIX A

EVALUATION MODEL SCHEMA

EVALUATION MODEL SCHEMA



APPENDIX B

PLANNING WORKSHOP, SUBGROUPS AND MEMBERS

NAME	AREA REPRESENTING
GROUP A: Instructional Computing	
Jenelle Leonard	Computer Literacy
Mary White	Language Arts
James Williams	Principal (Cardozo)
James T. Brown	Management Services
Robert Mann	Program Planning
Anne Pitts	ECIA Chapter 1
William Bedford	Logistical Support
Thelma Michael	Writing to Read
Helen Turner	Instructional Service Center
Shirley Hammond	Principal (Brookland)
Gordon Lewis	Mathematics
GROUP B: Instructional Television	
J. Weldon Greene	Planning
Kyo Jhin	Educational Technology
Chauncey Berdan	Educational Technology
Grace Bradford	Instructional Service Center
Rena Watson	Instructional Service Center
Reuben Pierce	Secondary School Improvement
Arthur Scott	Educational Media Center
Aleta Alsop	Educational Technology
GROUP C: Library/Media Services	
James Murray	Media Services
Marie Harris	Library Services
Gilbert Hoffman	ECIA chapter 2
E. Louise White	Staff Development
Vera White	Principal (Jefferson)
Valeria A. Ford	Assessment, DQA
Dorothy Stephens	Instructional Services
GROUP D: Other Technology	
Patricia Hamilton	Educational Technology
Joseph Harris	Automated Instructional Management System
Lawrence Williams	Computer Laboratories
James Amick	Principal (Burdick)
Roger Fish	Program Planning
Ruth Clauselle	Asst. Principal (Burdick CDC)

APPENDIX C

GROUPS SUBMITTING STATUS REPORTS

GROUPS SUBMITTING STATUS REPORTS

EDUCATIONAL TECHNOLOGY STATUS REPORTS ARE ON FILE FROM THE FOLLOWING GROUPS:

Automated Instructional Management System

Computer Literacy Training Laboratory

Division of Bilingual Education

Division of Career and Adult Education

Division of Special Education

ECIA Chapter 1 Computer Assisted Instruction Program

Educational Media Center

Partnership Program with the DC Public Library

Plato Computer Assisted Instruction Program

Writing to Read

APPENDIX D

WORKSHOP AGENDA

EDUCATIONAL TECHNOLOGY
FIVE YEAR PLAN WORKSHOP
MARCH 4, 1986
TENTATIVE AGENDA

8:30 - 10:00 INTRODUCTIONS:

A representative will give a report on the current status of technology in each department: math, language arts, special education, etc.,

10:00 - 10:15 BREAK

10:15 - 12:00 Small Group Break-Out Sessions

Review of the 1987-88 to 1991-92 educational technology plan. Copies will have been disseminated to all participants prior to the meeting.

Identification of additional issues to be included in the plan.

Prioritize technology issues.

12:00 - 1:30 LUNCH

1:30 - 3:00 Continue Small Group Break Out Sessions

3:00 - 4:00 Present small group findings to whole committee

4:00 - 4:30 Wrap-Up Session.

EDUCATIONAL TECHNOLOGY
FIVE YEAR PLAN WORKSHOP GOALS

1. Include representatives from all instructional areas in writing the five year plan.

2. Gain an understanding of the current status of educational technology in all instructional areas.

3. Review the four year educational technology plan recently developed by the educational technology staff to make additions, selections, corrections, etc.

4. Identify additional issues to be included in the Five Year Plan, i.e., infusion of computers and technology into the curricula and instructional areas, computer application for special needs, etc.

5. Prioritize technology issues.

APPENDIX E

Small Group Reports - Copy of Goals From Each Group's Report

SMALL GROUP REPORTS - COPY OF GOALS FROM EACH REPORT

GROUP A: COMPUTER LITERACY

GOALS :

1. Look at the effective use of the computer
2. Look at instructional computing across the board--A global view
3. Look at resources for any of the issues (6) identified on the agenda

GROUP B: INSTRUCTIONAL TELEVISION

GOALS:

1. Instructional television will broaden the scope and quality of instruction and will enlarge the audience that will receive this instruction.
2. Instructional television will be integrated into other technologies.
3. Every school will have the capability to receive the instructional television signal.

GROUP C: LIBRARY AND MEDIA SERVICES

Goal: To deliver library/media services that conform to program standards defined nationally and locally and establish standards for facilities, equipment, materials, and personnel resources in accord with the identified needs of target groups.

GROUP D: ADDITIONAL TECHNOLOGIES

GOAL: Identify, evaluate, and pilot the use of new and future technologies to support the education goals and objectives of the school system.

APPENDIX F

Analysis of Results From Workshop Questionnaire

Analysis of Results from Educational Technology Workshop Questionnaire

1. To what extent do you feel you were able to contribute information effectively to your topic group?

Very Much				Not Very Much
5	4	3	2	1

2. How satisfied were you with the decisions and recommendations produced by your topic group?

Very Much				Not Very Much
5	4	3	2	1

N=18

	Very Much												Not Very Much											
Item Name	(5)		(4)		(3)		(2)		(1)		(0) No Response		Total		Mean									
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct	No.	Pct	No.	Pct.	No.	Pct.										
Contributed	12	66.7	5	27.8	1	5.6	0	0.0	0	0.0	0	0.0	18	100.0	4.61									
Satisfied	8	44.4	8	44.4	2	11.1	0	0.0	0	0.0	0	0.0	18	100.0	4.33									
Total	20	55.6	13	36.1	3	8.3	0	0.0	0	0.0	0	0.0	36	100.0	4.47									

APPENDIX G

Copy of Transmittal Letter to Division of Program Development and Planning on Submission of Educational Technology Five Year Plan

Office of Instruction
Division of Educational Technology
415 12th Street, N.W. Washington, D.C. 20004

August 28, 1986

Memorandum to: Mr. J. Weldon Greene
Director
Division of Program Development
and Planning

Subject: Educational Technology Five Year Plan Matrix

Enclosed is the DRAFT Educational Technology Five Year Plan Matrix. Four committees, composed of members from all disciplines, regions and grade levels, developed this matrix for the new five year plan. The committee members are enthusiastic about completing the matrix and the plan during the 1986-87 school year.

We look forward to resuming these efforts early this fall.

Please call me if you have suggestions or questions.

Kyo R. Jhin
Assistant Superintendent

KRJ:gmw

Enclosure

cc: Dr. Marsha McBeath

APPENDIX H

FIVE YEAR PLAN (MATRIX)

EDUCATIONAL TECHNOLOGY
IMPLEMENTATION PLAN

PROGRAM AREAS	SY 1985-87	SY 1987-88	SY 1988-89	SY 1989-90	SY 1990-91	SY 1991-92
1. Computer Literacy Training Laboratory						
Integrate Computers Into the Total Educational Process						
Integrate Computers Into Four Subject Areas o Language Arts o Science o Social Studies o Mathematics	Initiate development of comprehensive guidelines for teaching computer applications at specific grade levels which will include curriculum objectives in the four subject areas.	Continue development of comprehensive guidelines for teaching computer applications. Develop activities in subject areas to use computer applications in specific grade levels.	Pilot the use of the completed comprehensive guidelines. Continue development of guidelines in the four subject areas.	Disseminate guidelines for the four major subject areas. Revise and complete curriculum guides in four major subject areas.	Continue to pilot guidelines for the four major subject areas.	Continue to pilot guidelines for the four major subject areas.
Integrate Computers Into Additional Subject Areas				Initiate guidelines for teaching computer applications in additional subject areas.	Pilot guidelines for additional subject areas. Continue development of guidelines for additional subject areas.	Revise and complete piloted guidelines for additional areas. Distribute guidelines for additional subject areas.

PROGRAM AREAS	SY 1986-87	SY 1987-88	SY 1988-89	SY 1989-90	SY 1990-91	SY 1991-92
1. Computer Literacy Training Laboratory (Cont.)						Continue development of guidelines for additional subject areas.
		Introduce word processing in primary grades.	Use word processing in primary grades.	Use word processing in primary grades.	Use word processing in primary grades.	Use word processing in primary grades.
		Monitor the use of computers to ensure sex equity.	Monitor the use of computers to ensure sex equity.	Monitor the use of computers to ensure sex equity.	Monitor the use of computers to ensure sex equity.	Monitor the use of computers to ensure sex equity.
Evaluation	Develop a format for a yearly evaluation of the use of computers.	Conduct yearly evaluation of the use of computers.	Conduct evaluation of the use of computers.	Conduct evaluation of the use of computers.	Conduct evaluation of the use of computers.	Conduct evaluation of the use of computers.
Software		Establish Computer Software Lending/Reference Library.	Continue a Computer Software Lending/Reference Library.	Continue a Computer Software Lending/Reference Library.	Continue a Computer Sofware Lending/Reference Library.	Continue a Computer Software Lending/Reference Library.
		Review guidelines and procedures for selecting and evaluating software.			Review guidelines and procedures for selecting and evaluating software.	Review guidelines and procedures for selecting and evaluating software.
		Conduct a computer software needs assessment.			Conduct a computer software needs assessment.	Conduct a computer software needs assessment.

PROGRAM AREAS	SY 1986-87	SY 1987-88	SY 1988-89	SY 1989-90	SY 1990-91	SY 1991-92
I. Computer Literacy Training Laboratory Software (Cont.)		Evaluate, select and acquire software.	Evaluate, select and acquire software.	Evaluate, select and acquire software.	Evalute, select and acquire software.	Evalute, select and acquire software.
		Integrate the software into the curriculum.	Integrate the software into the curriculum.	Integrate the software into the curriculum.	Integrate the software into the curriculum.	Integrate the software into the curriculum.
			Compile listing of approved and purchased software.	Update listing of approved and purchased software.	Update listing of approved and purchased software.	Update listing of approved and purchased software.
Computer Literacy Training Laboratory Maintenance		Target Hardware: IBM computers	Target Hardware: IBM, Commodore 64, new purchases.	Target Hardware: IBM, Commodore 64, new purchases.	Target Hardware: IBM, Commodore 64 new purchases.	Target Hardware: IBM, Commodore 64, new purchases.
		Survey and determine in-house maintenance needs and capabilities.	Survey and determine additional in-house maintenance needs and capabilities based on SY 87-88 services and new equipment purchases.	Survey and determine additional in-house maintenance needs and capabilities based on SY 89-90 services and new equipment purchases.	Survey and determine additional in-house maintenance needs and capabilities based on SY 90-91 services and new equipment purchases.	Survey and determine additional in-house maintenance needs and capabilities based on SY 91-92 services and new equipment purchases.
		Negotiate with vendors to become authorized service agents in order to acquire parts and specialized instruments/tools.	Negotiate with additional vendors for newly-purchased equipment maintenance.	Negotiate with additional vendors for newly-purchased equipment maintenance.	Negotiate with additional vendors for newly-purchased equipment maintenance.	Negotiate with additional vendors for newly-purchased equipment maintenance.

PROGRAM AREAS	SY 1986-87	SY 1987-88	SY 1988-89	SY 1989-90	SY 1990-91	SY 1991-92
I. Computer Literacy Training Laboratory Maintenance (Cont.)		Establish a budget for maintenance operations needs.	Revise budget and acquisition based on years previous needs.	Revise budget and acquisition based on years previous needs.	Revise budget and acquisition based on years previous needs.	Revise budget and acquisition based on years previous needs.
	Hire and train technicians.	Acquire additional parts and staff, as necessary.	Acquire additional parts and staff, as necessary.	Acquire additional parts and staff, as necessary.	Acquire additional parts and staff, as necessary.	Acquire additional parts and staff, as necessary.
	Purchase specialized equipment, parts.					
	Establish an in-house preventive and repair maintenance facility and provide transportation.					
		Monitor in-house maintenance program.	Monitor in-house maintenance program.	Monitor in-house maintenance program.	Monitor in-house maintenance program.	Monitor in-house maintenance program.
		Expand student training opportunities in computer maitenance.	Expand student training opportunities in computer maintenance.	Expand student training opportunities in computer maintenance.	Expand student training opportunities in computer maintenance.	Expand student training opportunities in computer maintenance.
		Monitor maintenance contracts.	Monitor maintenance contracts.	Monitor maintenance contracts.	Monitor maintenance contracts.	Monitor maintenance contracts.

PROGRAM AREAS	SY 1986-87	SY 1987-88	SY 1988-89	SY 1989-90	SY 1990-91	SY 1991-92
11. Library/Media Services						
Improve Instructional Programs Through Library Media Services.						
Personnel		Hire 4 library media coordinators (1 per region). Establish pool of floating library media specialists to cover large schools. Designate service person to handle minor repairs.				
Services	Planning Year to determine status and needs for improved library/ media centers.	Establish 4 model library media centers; 1SHS, 1JHS, 2ES.	Upgrade library media centers in all SHS based on results of model sites.	Upgrade 41 ES library media centers based on results of model sites.	Upgrade 41 ES library media centers based on results of model sites.	Upgrade 40 ES library media centers based on results of model sites.

PROGRAM AREAS	SY 1986-87	SY 1987-88	SY 1988-89	SY 1989-90	SY 1990-91	SY 1991-92
II. Library Media Services (Cont.)	Develop plan for model library media sites	Complete a system analysis to develop specifications for installing non-print media on a computerized database.				
	Establish print media for film and library services.	Install non-print media database in (4) model sites.	Install non-print media database in all SHS and JHS.	Install non-print media database in (41) ES.	Install non-print media database in (41) ES.	Install non-print media database in (40) ES.
Staff Development		Require three (3) hour course for librarians which will include training to use the automated system.	Continue to deliver course-work to library media staff.	Continue to deliver course-work to library media staff.	Continue to deliver course-work to library media staff.	Continue to deliver course-work to library media staff.
Facilities		Define space required for library/media facilities based on student enrollment.	Target specific schools for facilities improvement.	Target specific schools for facilities improvement.	Target specific schools for facilities improvement.	Target specific schools for facilities improvement.

PROGRAM AREAS	SY 1986-87	SY 1987-88	SY 1988-89	SY 1989-90	SY 1990-91	SY 1991-92
II. Library/Media Services Facilities (Cont.)						
Equipment		Define equipment needs based on student enrollment. Identify brands, models. Purchase equipment for model sites.	Purchase equipment for computerized database in in all SHS and JHS.	Purchase equipment for computerized database in 41 ES.	Purchase equipment for computerized database in 41 ES.	Purchase equipment for computerized database in 40 ES.
Maintenance and Security	Analyze existing maintenance contracts. Develop guidelines to reserve equipment for replacement purposes.	Establish process for in-system maintenance.	Design apprenticeship program to maintain equipment.	Hire a maintenance staff.		
Evaluation	Develop an evaluation plan for model sites.	Complete a formative evaluation of model sites.	Complete summative evaluation of model sites. Complete a formative evaluation of improved library media centers in SHS and JHS.	Complete a formative evaluation of 41 improved library centers. Complete a summative evaluation of 41 SHS and JHS improved media centers.	Complete a formative evaluation of 41 improved library centers. Complete a summative evaluation of 41 improved media centers.	Complete a formative evaluation of 40 improved library centers. Complete a summative evaluation of 41 ES improved media centers.

PROGRAM AREAS	SY 1986-87	SY 1987-88	SY 1988-89	SY 1989-90	SY 1990-91	SY 1991-92
III. Instructional Television						
Prepare schools to receive instructional television Fixed Service.	Equip two (2) ES and one (1) JHS to pilot Instructional Television Fixed Service.	Equip thirteen (13) additional schools to receive ITFS.	Equip all SHS, special education centers and career centers to receive ITFS.	Equip all JHS and HS to receive ITFS.	Equip sixty (60) ES to receive ITFS.	Equip sixty (60) ES to receive ITFS.
	Wire classrooms.	Wire classrooms.	Wire classrooms.	Wire classrooms.	Wire classrooms.	Wire classrooms.
	Purchse and install a receiving antenna for each school receiving ITFS.	Purchse and install a receiving antenna for new ITFS schools.	Purchase and install a receiving antenna for new ITFS schools.	Purchase and install a receiving antenna for new ITFS schools.	Purchase and install a receiving antenna for new ITFS schools.	Purchase and install a receiving antenna for new ITFS schools.
	Purchase ten (10) color monitors for each school receiving ITFS.	Purchase required number of color monitors for each new ITFS school.	Purchase required number of color monitors for each new ITFS school.	Purchase required number of color monitors for each new ITFS school.	Purchase required number of color monitors for each new ITFS school.	Purchase required number of color monitors for each new ITFS school.
Maintenance	Establish maintenance contracts for transmitting and receiving ITFS equipment.	Establish maintenance contracts for transmitting and receiving ITFS equipment.	Establish maintenance contracts for transmitting and receiving ITFS equipment.	Establish maintenance contracts for transmitting and receiving ITFS equipment.	Establish maintenance contracts for transmitting and receiving ITFS equipment.	Establish maintenance contracts for transmitting and receiving ITFS equipment.
Security	Provide security for classroom monitors.	Provide security for classroom monitors.	Provide security for classroom monitors.	Provide security for classroom monitors.	Provide security for classroom monitors.	Provide security for classroom monitors.

PROGRAM AREAS	SY 1986-87	SY 1987-88	SY 1988-89	SY 1989-90	SY 1990-91	SY 1991-92
III. Instructional Television (Cont.)						
Broaden the Scope and Quality of Instruction Through Instructional Television	Identify, evaluate and match available television programs and selected videotapes and films to CBC objectives in: Math Science Social Studies Language Arts Teacher In-Service	Continue to identify, evaluate and match available programs and selected videotapes and films to CBC objectives in: Math Science Social Studies Language Arts Teacher In-Service	Continue to identify, evaluate and match available programs and selected videotapes and films to CBC objectives in: Math Science Social Studies Language Arts Teacher In-Service	Continue to identify, evaluate and match available programs and selected videotapes and films to CBC objectives in: Math Science Social Studies Language Arts Teacher In-Service	Continue to identify, evaluate and match available programs and selected videotapes and films to CBC objectives in: Math Science Social Studies Language Arts Teacher In-Service	Continue to identify, evaluate and match available programs and selected videotapes and films to CBC objectives in: Math Science Social Studies Language Arts Teacher In-Service
		Identify, evaluate and match available television programs and selected videotapes and films to CBC objectives in: Remedial Instr. Art/Music GED Instr. Math & Science Foreign Language Enrichment Instr. Comp. Literature SAT Instruction Computer Literacy	Continue to identify, evaluate and match available television programs and selected videotapes and films to CBC objectives in: Remedial Instr. Art/Music GED Instr. Math & Science Foreign Language Enrichment Instr. Comp. Literature SAT Instruction Computer Literacy	Continue to identify, evaluate and match available television programs and selected videotapes and films to CBC objectives in: Remedial Instr. Art/Music GED Instr. Math & Science Foreign Language Enrichment Instr. Comp. Literature SAT Instruction Computer Literacy	Continue to identify, evaluate and match available television programs and selected videotapes and films to CBC objectives in: Remedial Instr. Art/Music GED Instr. Math & Science Foreign Language Enrichment Instr. Comp. Literature SAT Instruction Computer Literacy	Continue to identify, evaluate and match available television programs and selected videotapes and films to CBC objectives in: Remedial Instr. Art/Music GED Instr. Math & Science Foreign Language Enrichment Instr. Comp. Literature SAT Instruction Computer Literacy

PROGRAM AREAS	SY 1986-87	SY 1987-88	SY 1988-89	SY 1989-90	SY 1990-91	SY 1991-92
III. Instructional Television (Cont.)			Identify, evaluate and match available television programs and selected videotapes and films to CBC objectives in: English Physical Educ. Career Educ. Business Educ. Bilingual Educ. Special Educ. Hearing/Sight Impaired	Continue to identify and match available television programs and selected videotapes to CBC objectives in: English Physical Educ. Career Educ. Business Educ. Bilingual Educ. Special Educ. Hearing/Sight Impaired	Continue to identify and match available television programs and selected videotapes to CBC objectives in: English Physical Educ. Career Educ. Business Educ. Bilingual Educ. Special Educ. Hearing/Sight Impaired	Continue to identify and match available television programs and selected videotapes to CBC objectives in: English Physical Educ. Career Educ. Business Educ. Bilingual Educ. Special Educ. Hearing/Sight Impaired
				Identify, evaluate and match available television programs and selected videotapes and films to CBC objectives in: Musical Festival Art Shows Ellington School of the Arts Productions Science Fairs Athletic Events	Continue to identify, evaluate and match available television programs and selected videotapes and films to CBC objectives in: Music Festival Art Shows Ellington School of the Arts Productions Science Fairs Athletic Events	Continue to identify, evaluate and match available television programs and selected videotapes and films to CBC objectives in: Music Festival Art Shows Ellington School of the Arts Productions Science Fairs Athletic Events

PROGRAM AREAS	SY 1986-87	SY 1987-88	SY 1988-89	SY 1989-90	SY 1990-91	SY 1991-92
IV. New and Emerging Technologies (Cont.)						
Planning	Establish a planning group to design high-technology schools based on the feeder school concept to pilot new and emerging technologies.					
	Develop a pilot school design and multi-year plan.	Implement the first phase of the pilot school design.	Continue to implement and refine design of pilot schools.	Continue to implement and refine design of pilot schools.	Continue to implement and refine design of pilot schools.	Continue to implement and refine design of pilot schools.
		Identify grade levels and subject areas to pilot technology applications.	Identify grade levels and subject areas to pilot technology applications.	Identify grade levels and subject areas to pilot technology applications.	Identify grade levels and subject areas to pilot technology applications.	Identify grade levels and subject areas to to pilot technology applications.
		Identify additional technological applications for trial and evaluation in pilot schools.	Identify additional technical applications for trial and evaluation in pilot schools.	Identify additional technical applications for trial and evaluation pilot schools.	Identify additional technical applications for trial and evaluation pilot schools.	Identify additional technical applications for trial evaluation in pilot schools.
		Identify initial pilot school sites.	Expand successful pilot programs in additional schools.	Expand successful pilot programs in additional schools.	Expand successful pilot programs in additional schools.	Expand successful pilot programs in additional schools.

PROGRAM AREAS	SY 1986-87	SY 1987-88	SY 1988-89	SY 1989-90	SY 1990-91	SY 1991-92
IV. New and Emerging Technologies (Cont.)						
Equipment	Identify resources needed for pilot schools, including budget and justifications.	Procure/secure necessary equipment and software.	Procure/secure necessary equipment and software.	Procure/secure necessary equipment and software.	Procure/secure necessary equipment and software.	Procure/secure necessary equipment and software.
Maintenance and Security	Determine maintenance and security requirements.	Establish maintenance agreements with vendors and provide security.	Establish maintenance agreements with vendors and provide security.	Establish maintenance agreements with vendors and provide securtiy.	Establish maintenance agreements with vendors and provide security.	Establish maintenance agreements with vendors and provide security.
Staff Development		Provide staff development/ training in the use and integration of hardware and software in selected curricular areas.	Provide staff development/ training in the use and integration of hardware and software in selected curricular areas.	Provide staff development/ training in the use and integration of hardware and software in selected curricular areas.	Provide staff development/ training in the use and integration of hardware and software in selected curricular areas.	Provide staff development/ training in the use and integration of hardware and software in selected curricular areas.
Evaluation	Develop formative and summative evaluation design for pilot schools.	Conduct formamative evaluation of the pilot schools and the technology implementation.	Conduct formamative and summative evaluations of new technologies.	Conduct formamative and summative evaluations of new technologies.	Conduct formamative and summative evaluations of new technologies.	Conduct formamative and summa-summative evaluations of new technologies.

PROGRAM AREAS	SY 1986-87	SY 1987-88	SY 1988-89	SY 1989-90	SY 1990-91	SY 1991-92
III. Instructional Television (Cont.)					Identify, evaluate and match available television programs and selected videotapes and films to CBC objectives in: Home Tutorials School Board Meetings Community Service	Continue to identify, evaluate and match available television programs and selected videotapes and films to CBC objectives in: Home Tutorials School Board Meetings Community Service

PROGRAM AREAS	1986-87	1987-88	SY 1988-89	1989-90	SY 1990-91	SY 1991-92
III. Instructional Television (Cont.)						
Staffing	Employ: (1) ITFS Director (1) Engineering Electronic	Employ: (1) Engineering Electronic Mechanic (1) Utilization Specialist	Employ: (1) Engineering Electronic Mechanic (2) Utilization Specialist (2) Production Personnel	Employ: (1) Engineering Electronic Mechanic (1) Utilization Specialist (2) Production Personnel		
Training	Provide training for ITFS personnel two times per month.	Provide training for ITFS personnel two times per month.	Provide training for ITFS personnel two times per month.	Provide training for ITFS personnel two times per month.	Provide training for ITFS personnel two times per month.	Provide training ITFS personnel two times per month.
	Provide utilization instruction for classroom teachers using ITFS every two months on specified curriculum areas. Additional training provided as requested.	Provide utilization instruction for classroom teachers using ITFS every two months on specified curriculum areas. Additional training provided as requested.	Provide utilization instruction for classroom teachers using ITFS every two months on specified curriculum areas. Additional training provided as requested.	Provide utilization instruction for classroom teachers using ITFS every two months on specified curriculum areas. Additional training provided as requested.	Provide utilization instruction for classroom teachers using ITFS every wo months on specified curriculum areas. Additional training provided as requested.	Provide utilization instruction for classroom teachers using ITFS every two months on specified curriculum areas. Additional training provided as requested.
Evaluation	Conduct formative evaluation and documentation of ITFS activities throughout the school year.	Conduct formative evaluation and documentation of ITFS activities throughout the school year.	Conduct formative evaluation and documentation of ITFS activities throughout the school year.	Conduct formative evaluation and documentation of ITFS activities throughout the school year.	Conduct formative evaluation and documentation of ITFS activities throughout the school year.	Conduct formative evaluation and documentation of ITFS activities thoughout the school year.

PROGRAM AREAS	SY 1986-87	SY 1987-88	SY 1988-89	SY 1989-90	SY 1990-91	SY 1991-92
IV. New and Emerging Technologies Will Be Used To To Improve Instruction and Learning						
Background	Establish/update a computerized inventory of hardware and software used for instruction and management in the district.	Update inventory.	Update inventory.	Update inventory.	Update inventory.	Update inventory.
	Establish an ongoing descriptive database of new and emerging technologies.	Continue gathering information for database.	Continue gathering information for database.	Continue gathering information for database.	Continue gathering information for database.	Continue gathering information for database.
	Provide district staff memberships in Educational Technology organizations to assist in the identification and implementation of new technologies.	Establish a process for sharing information gained through Ed. Tech. memberships about new technologies.	Share information about new technologies.	Share information about new technologies.	Share information about new technologies.	Share information about new technologies.